

## REMARKS

### STATUS OF CLAIMS

Claims 3, 7, 12, 14-16, 18, 20-21, 26-27, 30-31, 34-35, and 40 were previously cancelled.

No claims have been amended, added, or withdrawn.

Claims 1-2, 4-6, 8-11, 13, 17, 19, 22-25, 28-29, 32-33, 36-39, and 41-66 are currently pending in the application.

The following table indicates which claims of the three types, method, computer-readable storage medium, and communications device, have similar features. The claims in bold are the independent claims.

<b>Method Claims</b>	<b>Computer-Readable Storage Medium Claims</b>	<b>Communications Device Claims</b>
1, 2	<b>38, 39</b>	<b>44, 45</b>
4, 52	<b>41, 63</b>	<b>46, 47</b>
5, 6, 8-11, 13, 17, 19	<b>42, 55-62</b>	<b>28, 29, 32-33, 36-37, 53-54</b>
<b>22, 23-25</b>	<b>43, 64-66</b>	<b>48, 49-51</b>

### SUMMARY OF THE REJECTIONS

The Office Action includes only a Restriction Requirement among six allegedly patentably distinct species that are identified in the Office Action as follows:

**AA** – first participant (claims 19, 47, 62) and protocol is IEEE 802.15.1 (claims 52 and 63);

**BA** – first participant and at least one other participant from the plurality of participants (claims 19, 47, 62) and protocol is IEEE 802.15.1 (claims 52 and 63);

**CA** –one or more participants from the plurality of participants but not including the first participant (claims 19, 47, 62) and protocol is IEEE 802.15.1 (claims 52 and 63);

**AB** – first participant (claims 19, 47, 62) and protocol is Bluetooth standard (claims 52 and 63);

**BB** – first participant and at least one other participant from the plurality of participants (claims 19, 47, 62) and protocol is Bluetooth standard (claims 52 and 63);

**CB** –one or more participants from the plurality of participants but not including the first participant (claims 19, 47, 62) and protocol is Bluetooth standard (claims 52 and 63).

The Office Action states that “The species are independent or distinct because they have been claimed as a Markush claim and disclosed as separate embodiments leading the examiner to interpret the members of the group as drawn to distinct separate species since they have different utility and structures to perform their particular functions.”

#### APPLICANT’S ELECTION IN RESPONSE TO THE RESTRICTION REQUIREMENT

The Office Action states that the “Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added.”

In response to the Restriction, the **Applicant elects** for prosecution on the merits the species identified in the Office Action as “**BB** - first participant and at least one other participant from the plurality of participants (claims 19, 47, 62) and protocol is Bluetooth standard (claims 52 and 63).”

The following is the list of all claims upon which the elected species “**BB**” is readable thereon: Claims 1-2, 4-6, 8-11, 13, 17, 19, 22-25, 28-29, 32-33, 36-39, and 41-66. The Applicant notes that this listing of Claims includes all claims currently pending.

In addition, the Applicant notes that the other five species identified in the Office Action, namely species “AA,” “BA,” “CA,” “AB,” and “CB,” each read on each claim of this same listing of claims, which are all of the pending claims in the Application.

The Applicant’s election is made with traverse because, for the reasons provided herein, the six alleged “species” are neither independent nor distinct, for the reasons provided below.

## THE OFFICE ACTION'S IDENTIFICATION OF A GENERIC CLAIM (OR LACK THEREOF) AND IDENTIFICATION OF SPECIES

According to MPEP §809.02(a), a restriction requirement based on different species is to include both (A) an identification of the generic claims or an indication that there are no generic claims present and (B) clear identification of the disclosed species.”

Regarding requirement (A) of MPEP §809.02(a), the Applicant is unable to locate anywhere within the Office Action any indication of whether or not there are generic claims in the Application. Therefore, the Applicant is proceeding on the basis that the Office Action meant to indicate that there are no generic claims pending in the Application. However, as described herein, the Applicant considers each of the pending claims to be a generic claim with respect to the six alleged “species” of the Office Action.

Regarding requirement (B) of MPEP §809.02(a), the Office Action has described the six species in terms of the six possible combinations of the two Markush groups given in the claims, namely the first Markush group of Claims 19, 47, and 62 that has three members and the second Markush group of Claims 52 and 63 that has two members, which means that there are six possible combinations of the members of the two Markush groups. The Office Action states that these six species have been “claimed as a Markush claim *and disclosed as separate embodiments...*” (Emphasis added.) However, for the reasons given herein, the Applicant respectfully disagrees that these six alleged “species” are disclosed as “separate embodiments” in the Application.

The Applicant is unable to find any disclosure within the Application of any of the six alleged species. While IEEE 802.15.1 and Bluetooth of the Markush group of Claims 52 and 63 are frequently referred to within the Application, the Applicant is unable to find any disclosure that these two frequency hopping protocols are independent and distinct from each other, little less that either protocol is disclosed as an embodiment with any of the members of the Markush group of Claims 19, 47, and 62, little less that there are six embodiments disclosed in the Application that correspond to the six species alleged in the Office Action.

In addition, the Applicant is unable to find any disclosure that the IEEE 802.15.1 standard and the Bluetooth standard as separate embodiments. In fact, the references to both frequency hopping protocols show their similarities, not their differences, as in the following examples from the Application: “For example, in Bluetooth and IEEE 802.15.1, the known

preamble is called the “channel access code...” (Application, page 4, lines 16-17); “For example, in a Bluetooth or IEEE 802.15.1 FH communications system, the master may provide a slave with data that identifies the communications channel that is selected in block 114...” (Application, page 19, lines 16-17); “As an example, in Bluetooth and IEEE 802.15.1, the data packet must pass a CRC check, otherwise the packet must be retransmitted...” (Application, page 32, lines 14-16); “As an example, in Bluetooth or IEEE 802.15.1, the packet header is 1/3 FEC coded, and the payload is 2/3 FEC coded...” (Application, page 32, lines 21-23); “Master to slave packet 300 may be used in a Bluetooth or an IEEE 802.15.1 FH communications system...” (Application, page 39, lines 1-2); and “Master to slave packet 300 may be for a Bluetooth or an IEEE 802.15.1 FH communications system...” (Application, page 40, lines 25-26).

In addition, the second Markush group of Claims 19, 47, and 62 is described in the Application on page 20, lines 7-8 as follows: “participant P5 is designated as an associate master participant by master participant P4, slave participants P1-P3, or another mechanism or process.” Also, the second Markush group of Claims 19, 47, and 62 is described in Claims 20 and 21 as originally filed as follows: “wherein the second participant is designated by the first participant” and “wherein the second participant is designated by one or more participants from the plurality of participants.” However, no mention is made of any frequency hopping protocol therein in any of these descriptions of the members of the second Markush group of Claims 19, 47, and 62. As a result, the Applicant is unable to find any disclosure that these three members of the Markush group of Claims 19, 47, and 62 are disclosed in separate embodiments as being independent and distinct from each other, little less that either protocol is disclosed as an embodiment with any of the members of the Markush group of Claims 52 and 63, little less that there are six embodiments disclosed in the Application that correspond to the six species alleged in the Office Action

Therefore, the Applicant respectfully submits that the six alleged species identified in the Office Action have not been disclosed as separate embodiments in the Application. If the Examiner disagrees, the Applicant respectfully requests that the next communication from the Office include an identification of where each of the six alleged species are disclosed within the Application.

As an additional observation, the Applicant has cited MPEP §806.04(e) below in identifying generic claims from the pending claims of the application, and that portion of the MPEP *emphasizes that claims are not species*, but rather that the species are the separately disclosed embodiments of the specification, upon which the claims may read. Thus, it appears odd to the Applicant that the species that are identified in the Office Action are based *on the claims, not the embodiments* that are disclosed in the specification. Furthermore, it appears even odder to the Applicant that the alleged six species happen to exactly coincide with the six possible combinations of the elements of the two Markush groups included in the claims. Furthermore, the Applicant fails to understand how the six alleged species can be “independent and distinct” from each other, and hence truly separate species, when each of the two Markush group depends from an independent claim that reads on the other Markush group and vice versa.

THE TWO MEMBERS OF THE SECOND MARKUSH GROUP OF CLAIMS 52 AND 63,  
ARE NOT IDEPENDENT OR DISTINCT FROM EACH OTHER

Claims 52 and 63 include the second Markush group upon which the restriction requirement is based, namely the “frequency hopping protocol defined by Institute of Electrical and Electronics Engineers 802.15.1 Wireless Personal Area Network Standard” (e.g., IEEE 802.15.1) and the “frequency hopping protocol that conforms to a Bluetooth communications standard for transmissions over a 2.4 GHz band.” However, for the reasons set forth herein, the Applicant respectfully submits that the two members of this second Markush group of Claims 52 and 63 are not independent or distinct from each other, and rather, that the contrary is the case and that the two are largely the same.

As described in the Application: “An example of a frequency hopping protocol is the Institute of Electrical and Electronics Engineers (IEEE) 802.15.1 Wireless Personal Area Network Standard, which is based on the Bluetooth™ wireless personal area network (WPAN) technology from the Bluetooth Special Interest Group (SIG).” (Application, page 4, lines 1-4.) As noted above, references to both the IEEE 802.15.1 standard and the Bluetooth standard illustrate their similarities, which is to be expected since the IEEE 802.15.1 is based upon the Bluetooth standard.

Also, the Applicant has enclosed in the Appendix a copy of the IEEE 802.15 WPAN Task Group 1 (TG1) home page that states: “The IEEE Project 802.15.1 has derived a Wireless Personal Area Network standard based on the Bluetooth v1.1 Foundation Specifications.” Later in the Abstract of the IEEE 802.15.1 home page, it states: “The lower transport layers (L2CAP, LMP, Baseband, and radio) of the Bluetooth wireless technology are defined. Bluetooth is an industry specification for short-range RF-based connectivity for portable personal devices. The IEEE has reviewed and provided a standard adaptation of the Bluetooth Specification v1.1 Foundation MAC (L2CAP, LMP, and Baseband) and PHY (Radio)...”

Because IEEE 802.15.1 is an adaptation of the Bluetooth standard, the similarities identified in the Application are to be expected. The Applicant notes that there may possibly be some differences between the IEEE 802.15.1 standard and the Bluetooth standard, although the Applicant is not currently aware of any such differences.

However, given that the IEEE 802.15.1 standard is an adaptation of the Bluetooth standard and the similarities between the two as identified in the Application, which results in the observed overlap in scope between IEEE 802.15.1 and the Bluetooth standard, the Applicant respectfully submits that there is no reasonable basis for treating the two as separate independent and distinct species, as in the present Office Action’s restriction requirement.

**THE THREE MEMBERS OF THE FIRST MARKUSH GROUP OF CLAIMS 19, 47, AND 62  
ARE NOT IDEPENDENT OR DISTINCT FROM EACH OTHER**

Claims 19, 47, and 62 include the first Markush group upon which the restriction requirement is based, namely “(a) the first participant, (b) the first participant and at least one other participant from the plurality of participants, and (c) one or more participants from the plurality of participants but not including the first participant.” However, for the reasons set forth herein, the Applicant respectfully submits that the three members of this first Markush group of Claims 19, 47, and 62 are not independent or distinct from each other.

The second member of this Markush group is “the first participant and at least one other participant from the plurality of participants,” whereas the first member of this Markush group is “the first participant” and the third member of this Markush group is “one or more participants form the plurality of participants but not including the first participant.” Thus, a

comparison of the second member of the Markush group to the first and third members shows that the second member is merely the combination of the first and third members, and thus there is a significant overlap in scope between the second member of the Markush group and the first and third members. Therefore, it is not possible that the three members of the Markush group of Claims 19, 47, and 62 to be separate and distinct from each other because the second member is merely the combination of the first and third members. As a result, the Applicant respectfully submits that there is no reasonable basis for treating the three members of the Markush group of Claims 19, 47, and 62 as separate and distinct species, as in the present Office Action's restriction requirement.

#### THE OFFICE ACTION'S RATIONALE THAT THE SPECIES HAVE DIFFERENT UTILITY AND STRUCTURES TO PERFORM THEIR PARTICULAR FUNCTIONS

The Office Action states that the examiner has interpreted the combinations of the members of the two Markush groups "as drawn to distinct and separate species since they have different utility and structures to perform their particular functions." However, the Applicant respectfully disagrees that the three alleged species have different utility or structures.

Each of the six alleged species has the same utility because each species includes a particular frequency hopping protocol and one or more participants that designate the second participant to perform the one or more functions if any of one or more criteria are satisfied.

With regard to the two frequency hopping protocols of the Markush group of Claims 52 and 63 that are represented in the six species, there is no "structure" that is different between the two. With regard to the three members of the Markush group of Claims 19, 47, and 62 that are represented in the six species, the "structure" of the second member of the Markush group is merely the combination of the first and third members, and thus the second member of the Markush group is not different from the first and third members. The Applicant does note that the extent that that first and third members of the Markush group of Claims 19, 47, and 62 are different since the latter specifically excludes the former. \

However, even with the first and third members being exclusive of each other, all of the participants being referred to are included in the base claims from which Claims 19, 47, and 62 depend (e.g., Claims 5, 46, and 42, respectively). Thus, even to the extent that different

participants designate the separate participant in Claims 19, 47, and 62, all of the participants referred to in Claims 19, 47, and 62 are included in Claims 5, 46, and 42, respectively, and thus the structures (e.g., the participants) among the different members of the Markush group of Claims 19, 47, and 62 are already present in the independent claims from which Claims 19, 47, and 62 depend. Therefore, the Applicant respectfully submits that there is no reasonable basis for treating the three members of the Markush group of Claims 19, 47, and 62 as separate and distinct from each other.

#### IDENTIFICATION OF GENERIC CLAIMS FROM THE PENDING CLAIMS

As noted above, the Office Action has failed to identify a generic claim or to state that there is no generic claim, and as a result, the Applicant is proceeding on the basis that the Office Action meant to state that there is no generic claim. However, for the reasons given herein, the Applicant respectfully submits that any of the pending claims of the present application can be considered to be a generic claim with respect to the six alleged species of the restriction requirement.

MPEP §806.04(e) states:

“Claims are definitions of inventions. *Claims are never species*. The scope of a claim may be limited to a single disclosed embodiment (i.e., a single species, and thus be designated a *specific species claim*), or a claim may include two or more of the disclosed embodiments within the breadth and scope of the claim (and thus be designated a *generic or genus claim*). *Species are always the specifically different embodiments*.” (Emphasis in original.)

The Applicant respectfully submits that there are no “specific species claims” pending in the Application because the scope of none of the pending claims are limited to just one of the six alleged species identified in the Office Action, based on the definition of “specific species claim” from MPEP §806.04(e) quoted above.

Regarding identification of generic claims for the alleged species, the Application notes that dependent Claims 19, 47, and 62 feature which participants or communications devices (e.g., the first participant/device, one or more of the other participants/devices, or both) of independent Claims 5, 46, and 42, respectively, designate the second participant/device to perform the one or more functions if any of the one or more criteria are



satisfied, whereas dependent Claims 52 and 62 feature two related specific frequency hopping protocols as the frequency hopping protocol of independent Claims 4 and 41.

Considering the method claims first, each of independent method Claims 4 and 5 include “a first participant, “a plurality of participants,” “designating the second participant from the plurality of participants to perform the one or more functions if any of the one or more criteria are satisfied “frequency hopping protocol” and “a frequency hopping protocol.” Therefore, because both of Claims 4 and 5 include within their scope each of the six alleged species identified in the Office Action, the Applicant respectfully submits that either of Claims 4 and 5 is a generic claim with respect to the six alleged species. In addition, Claims 6, 8-11, 13, 17, and 19 are dependent upon Claim 5, and thus include each and every feature of Claim 5. As a result, the Applicant respectfully submits that each of Claims 6, 8-11, 13, 17, and 19 is a generic claim with respect to the six alleged species.

Similarly, both of independent computer-readable storage medium claims Claim 41 and 42 include “a first participant, “a plurality of participants,” “designating the second participant from the plurality of participants to perform the one or more functions if any of the one or more criteria are satisfied “frequency hopping protocol” and “a frequency hopping protocol.” Therefore, because both of Claims 41 and 42 include within their scope each of the six alleged species identified in the Office Action, the Applicant respectfully submits that either of Claims 41 and 42 is a generic claim with respect to the six alleged species. In addition, Claims 55-62 are dependent upon Claim 41, and thus include each and every feature of Claim 41. And as a result, the Applicant respectfully submits that each of Claims 55-62 is a generic claim with respect to the six alleged species.

Finally, independent device Claim 46 includes “a first communications device, “a plurality of communications device,” “designate the second communications device from the plurality of communications device to perform the one or more functions if any of the one or more handoff criteria are satisfied,” and “a frequency hopping protocol.” Therefore, because Claim 46 includes within its scope each of the six alleged species identified in the Office Action, the Applicant respectfully submits that Claim 46 is a generic claim with respect to each of the six alleged species.

In addition, each of the remaining independent claims, namely Claims 1, 22, 28, 38, 43, 44, and 48 include the designation of a second participant/device, and most of them, but

not all, include a frequency hopping protocol. While some of these other independent claims do not expressly include a frequency hopping protocol, the use of such a protocol is not excluded in those claims. Thus, the Applicant respectfully submits that any of independent Claims 1, 22, 28, and 38 is a generic claim with respect to the six alleged species identified in the Office Action because any of these claims read on the six alleged species. And each of Claims 1, 22, 28, 38, 43, 44, and 48 includes one or more dependent claims, namely Claims 2, 22-25, 29, 32, 33, 36, 37, 39, 45, 49-51, 53, 54, and 64-66, and thus the Applicant respectfully submits that any of those dependent claims is a generic claim with respect to the six alleged species identified in the Office Action.

In summary, any of the pending claims of the present Office Action is a generic claim to the six alleged species identified in the Office Action. However, if the Examiner believes that any of the pending claims of the Application is not a generic claim with respect to the six alleged species, the Applicant respectfully submits that the next communication from the Office identify and explain which of the pending claims is not generic with respect to the six alleged species.

As a result of all the pending claims being generic with respect to the six alleged species, the Applicant has not withdrawn or cancelled any of the pending claims. If the Examiner maintains the restriction among the alleged species or some subset thereof, the Applicant respectfully requests that the Examiner identify which of the pending claims do not read on which species. As the claims presently stand, the Applicant is unable to identify any pending claim that does not read on each of the six alleged species.

## CONCLUSION

The Applicant believes that all issues raised in the Office Action have been addressed and that allowance of the pending claims is appropriate. Further examination on the merits is respectfully requested.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

To the extent necessary to make this reply timely filed, the Applicant petitions for an extension of time under 37 C.F.R. § 1.136.

If any applicable fee is missing or insufficient, throughout the pendency of this application, the Commissioner is hereby authorized to any applicable fees and to credit any overpayments to our Deposit Account No. 50-1302.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

Date: August 3, 2006



Craig G. Holmes  
Reg. No. 44,770

2055 Gateway Place, Suite 550  
San Jose, CA 95110-1089  
Telephone: (408) 414-1207  
Facsimile: (408) 414-1076

Appendix

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Hon. Commissioner for Patents, Mail Stop AMENDMENT, P.O. Box 1450, Alexandria, VA 22313-1450.

on August 3, 2006 by Craig Reynolds

# **Appendix**

## **Copy of Home Page from IEEE 802.15 WPAN Task Group 1 (TG1)**


 search

## WPAN Home Page

Did you find broken links or are you confused about our Web site? Please submit your comments [here](#).

### IEEE Wireless Zone

[IEEE 802.11 WLAN](#)

[IEEE 802.16 WMAN](#)

[IEEE 802.18 Regulatory](#)

[IEEE 802 LMSC](#)

[IEEE-SA](#)

[IEEE-ISTO](#)

[IEEE](#)

# IEEE 802.15 WPAN Task Group 1 (TG1)

Thursday, 6 July 2006

The IEEE Project 802.15.1 has derived a Wireless Personal Area Network standard based on the [Bluetooth™ v1.1 Foundation Specifications](#).

## IEEE 802.15.1 CURRENT STATUS

The IEEE Std 802.15.1™-2002 was published 14Jun02.

The IEEE Std 802.15.1™-2002 was approved as a new standard by the IEEE-SA Standards Board on 15 April 2002. All IEEE standards shall be updated within five years of the date of publication. If the standard is not revised, reaffirmed, or withdrawn within five years, the sponsor will be notified that it will be submitted to the Standards Board for administrative withdrawal.

Additionally, the Project 802.15.1 has published the following Press Release based on the IEEE-SA Standards Board conditional approval:

- [IEEE-SA IEEE Std 802.15.1™-2002 Press Release](#)

## IEEE 802.15.1 OVERVIEW

The new IEEE Std 802.15.1™-2002 standard is an additional resource for those who implement Bluetooth devices. The following 802.15.1 abstract provides more info:

**Abstract:** The lower transport layers (L2CAP, LMP, Baseband, and radio) of the Bluetooth™ wireless technology are defined. Bluetooth is an industry specification for short-range RF-based connectivity for portable personal devices. The IEEE has reviewed and provided a standard adaptation of the Bluetooth Specification v1.1 Foundation MAC (L2CAP, LMP, and Baseband) and PHY (Radio). Also specified is a clause on SAPs which includes a LLC/MAC interface for the ISO/IEC 8802-2 LLC. Also specified is an normative annex which provides a Protocol Implementation Conformance Statement (PICS) proforma. Also specified is a informative high level behavioral ITU-T Z.100 Specification and description language (SDL) model for an integrated Bluetooth MAC Sublayer.

BEST AVAILABLE COPY

## **IEEE 802.15.1 KEY URLS**

- [IEEE 802.15.1 Offsite Links Page, in HTML.](#)
- [PAR, in Acrobat PDF \(21KB\).](#)
- [Corrigendum: Approve: PAR number change for 802.15 to 802.15.1, in HTML.](#)
- [Five Criteria, in HTML.](#)

## **IEEE 802.15.1 OTHER INFORMATION**

- [IEEE 802.15.1-2002 SDL source, in ZIP \(1641KB\).](#) <sup>NEW</sup>
- [IEEE 802.15.1 Clause 5 reprint, in PDF \(32KB\).](#)
- [Received Letters of Assurance for Essential Patents:](#)
  - [PatCom Patent LoA Database](#)
  - [WG Patent Letter Archive](#)
- [IEEE-SA Standards Board Patent Committee \(PatCom\) Home page.](#)
- [The IEEE Patent Policy set forth in Clause 6 of the IEEE Standards Board Bylaws.](#)
- [Procedures relating to the Patent Policy in Clause 6.3 of the IEEE Standards Operations Manual.](#)
- [Requesting an interpretation of the Standard.](#)
- [IEEE 802 Standards Available for Free Download.](#)
- [IEEE Standards On-Line Subscription Information.](#)
- [IEEE On-Line Catalog & Store List of IEEE 802.15 Stds available for purchase.](#)
- [IEEE Standards Ordering Information.](#)

## **IEEE 802.15.1 BALLOTS AND DRAFTS**

## **IEEE 802.15.1 MINUTES**

## **IEEE 802.15.1 OFFICERS CONTACT INFORMATION**

- Chair: [Ian Gifford](#)
- Vice Chair: [Chatschik Bisdikian](#)
- Technical Editor: [Tom Siep](#)
- Secretary: [Michael McInnis](#).

The Institute of Electrical and Electronics Engineers, Inc.



BEST AVAILABLE COPY

7/6/2006